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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Allocation of Spectrum Below	)	
5 GHz Transferred from	)	ET Docket No. 94-32
Federal Government Use	)	

To: The Commission

REPLY OF COMSAT CORPORATION

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COMSAT Corporation

John S. Hannon, Jr.
Nancy J. Thompson

COMSAT Mobile Communications
22300 COMSAT Drive
Clarksburg, MD 20871
(301) 428-2268

Its Attorneys

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SUMMARY

Many of the comments filed in this proceeding question the Commission's proposal to adopt a "flexible allocation" plan for the bands 2390-2400 MHz, 2402-2417 MHz and 4660-4685 MHz. COMSAT agrees that such an approach is inconsistent with sound spectrum management policies and with the Commission's role in administering non-government radio spectrum in the United States.

As an alternative, we strongly support the general approach taken by Loral/Qualcomm Partnership ("LQP") to allocate the 50 Mhz of spectrum for service and feeder link bands for mobile satellite service ("MSS") systems. Such allocations are needed to accommodate the service requirements of MSS systems operating in the United States and worldwide. Moreover, the Commission previously has recognized the demand for MSS, and the potential value of global MSS systems, and has pledged to use its administrative processes to identify suitable spectrum to facilitate use of worldwide MSS. We urge the Commission to stand by its commitment to MSS, and to take the opportunity in this proceeding to allocate 25 MHz of spectrum at 2.3/2.4 GHz for MSS service links and 25 MHz of spectrum at 4 GHz for MSS feeder links.

TABLE OF CONTENTS

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To: The Commission

REPLY OF COMSAT CORPORATION

COMSAT Corporation ("COMSAT"), through its COMSAT Mobile Communications ("CMC") division, hereby submits its Reply to Comments filed on the Commission's Notice of Proposed Rule Making ("NPRM") in ET Docket 94-32, concerning the allocation of 50 MHz of radio spectrum recently transferred from the Federal Government to the private sector.[1]

Many of the comments filed in this proceeding question the Commission's proposal to adopt a "flexible allocation" plan for the bands 2390-2400 MHz, 2402-2417 MHz and 4660-4685 MHz. COMSAT agrees that such an approach is inconsistent with sound spectrum management policies and with the Commission's role in administering non-government radio spectrum in the United States.

As an alternative, we strongly support the general approach taken by Loral/Qualcomm Partnership ("LQP") to allocate the 50 Mhz of spectrum for service and feeder link bands for mobile satellite service ("MSS") systems. Such allocations are needed to accommodate the service requirements of MSS systems operating

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[1] Notice of Proposed Rule Making, ET Docket 94-32, FCC 94-172, released November 8, 1994 ("NPRM"). By Public Notice, DA 94-1591, released December 28, 1994, the Commission extended the date for filing reply comments to January 6, 1995.

in the United States and worldwide. Moreover, the Commission previously has recognized the demand for MSS, and the potential value of global MSS systems, and has pledged to use its administrative processes to identify suitable spectrum to facilitate use of worldwide MSS. We urge the Commission to stand by its commitment to MSS, and to take the opportunity in this proceeding to allocate 25 MHz of spectrum at 2.3/2.4 GHz for MSS service links and 25 MHz of spectrum at 4 GHz for MSS feeder links.

I. THE "FLEXIBLE ALLOCATION" APPROACH IS INCONSISTENT WITH THE COMMISSION'S SPECTRUM MANAGEMENT OBLIGATIONS

The Commission proposes, as its primary allocation scheme, to designate the bands 2390-2400 MHz, 2402-2417 MHz, and 4660-4685 MHz for "general Fixed and Mobile services," rather than to designate these frequency bands for specific uses. NPRM at para. 9. In addition, the NPRM expresses the Commission's desire to award licenses for this spectrum through competitive bidding. The Commission believes that such an approach will permit flexible use of these bands by a range of services and will ensure that the spectrum is put "to its best and most valued use." Id. at para. 8.

COMSAT shares the concerns raised by many of the comments in this proceeding regarding the Commission's so-called "flexible

allocation" approach.[2] We believe that the Commission's spectrum proposal is inconsistent with sound spectrum management policies and represents an abdication of the Commission's role under the Communications Act of 1934, as amended, in administering radio spectrum allocations in the United States. See, e.g., Comments of UTC at 3. Under Section 303 of the Communications Act, the Commission is required, as part of the allocation process, to "[a]ssign bands of frequencies to the various classes of stations." 47 U.S.C. 303. Rather than make this determination itself -- after considering the public interest benefits and the technical constraints of the various services -- the Commission, in the instant proceeding, has proposed to let "market forces" and the auction process determine which services will prevail in these bands. NPRM at para. 9. Under such an approach, the "public interest" standard in Section 303 of the Act would be rendered meaningless and the Commission would relinquish its responsibilities as a spectrum manager.

Contrary to statements in the NPRM, such an approach is not consistent with the spectrum plan adopted in the emerging technologies proceeding in ET Docket No. 92-9. In ET Docket No. 92-9, the Commission redesignated spectrum in the 2 GHz band to compile a spectrum reserve within which future services would operate. In a separate proceeding, the Commission adopted rules

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[2]As discussed below, we prefer to the Commission's approach as a spectrum "identification scheme," given that no specific allocation is being proposed consistent with the service definitions employed in Part 2 of the Commission's Rules. See 47 C.F.R. § 2.1, et. seq.

for specific emerging technologies and allocated bands to specific services such as the personal communications services ("PCS") and MSS. The "flexible allocation" approach advocated in the NPRM covers only part of the process applied to emerging technologies -- the identification of spectrum -- and overlooks the second step of the process in which spectrum is, then, allocated to specific services, and rules are adopted for licensing and operating radio stations.[3]

The approach taken by the Commission also appears to directly contradict the Commission's auctioning authority as conferred in the 1993 Omnibus Budget Reconciliation Act. As indicated in many comments filed in this proceeding, Section 309 of the Communications Act prohibits the Commission from making allocation decisions on the basis of competitive bidding. See, e.g., Comments of UTC at 8. Moreover, COMSAT is particularly concerned that such an allocation scheme, in conjunction with the NPRM's suggestion that the spectrum should be divided into channel blocks of one to two MHz, would unfairly burden MSS systems and preclude MSS participation in a "general Fixed and Mobile" allocation scheme.[4]

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[3]UTC notes that the NPRM also fails to provide a transition framework to relocate existing users of the spectrum. See UTC Comments at 6.

[4]See Comments of COMSAT, PP Docket No. 93-253, November 10, 1993 (stating that competitive bidding is not suitable for global MSS systems); see also LQP Comments, ET Docket No. 94-32, at 10-11.

For these reasons, COMSAT urges the Commission to reject its spectrum identification approach and, instead, adopt an alternative approach, discussed below, which would allocate the 50 MHz of newly transferred spectrum to MSS operations.

II. THE COMMISSION SHOULD ALLOCATE ALL 50 MHZ OF SPECTRUM FOR USE BY THE MOBILE SATELLITE SERVICE

COMSAT endorses an alternative allocation proposal for the bands 2390-2400 MHz, 2402-2417 MHz and 4660-4685 MHz which would allocate this spectrum for service and feeder link bands for geostationary orbit ("GSO") and non-geostationary orbit ("non-GSO") MSS systems. In reply comments filed in the Notice of Inquiry stage of this proceeding, COMSAT indicated that the spectrum at 2 GHz could be allocated for MSS service links and that the spectrum near 5 GHz would be useful for designation as non-GSO feeder links.[5] Accordingly, we support generally LQP's comments on the NPRM which propose that the 2390-2400 MHz and 2402-2417 MHz bands be allocated for uplink and downlink MSS operations, respectively, and that the 4660-4685 MHz band be allocated for MSS feeder links.

A. Substantial Amounts of Spectrum Are Required to Meet Demand for GSO and Non-GSO MSS Systems

The demand for handheld service provided by global MSS systems is expected to be considerable. Submissions to the Industry Advisory Committee ("IAC") preparing for the upcoming 1995 World Radio Conference ("WRC-95") suggest that demand for

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[5]See Letter of Nancy J. Thompson to William F. Caton, ET Docket No. 94-32, June 30, 1994.

global MSS is expected to rise from 3-4 million subscribers in year 2000, to 8-13 million by 2005, and up to 22-37 million by 2010.[6] Based on these subscriber projections, LQP calculates the total bandwidth requirements for non-GSO MSS will range from 19.3 MHz to 103 MHz -- in each direction -- during the years 2000 to 2010. Inmarsat projects that bandwidth requirements will range from 75 MHz to 150 MHz in each direction for the years 1995-2005 for both GSO and non-GSO MSS systems.

Because of the demand and bandwidth requirements for MSS, the 2390-2400 MHZ and 2402-2417 MHz bands will be needed to provide additional service capacity for first and second generation GSO and non-GSO MSS systems. It is equally important that the Commission allocate the 4660-4685 MHz band to non-GSO MSS feeder links due to the difficulty in identifying suitable feeder link spectrum below 16 GHz for non-GSO MSS systems.[7]

As noted in LQP's Comments, additional MSS spectrum is necessary to accommodate the "Big LEO" MSS systems which must share the 16.5 MHz of spectrum at 1610-1626.5 MHz for uplink operations and face constraints on their use of the lower portion of this band. LQP Comments at 3-5. In the Big LEO RDSS/MSS

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[6] See LQP Comments at 6-7 (citing document IWG-3/11 (Rev.2)).

[7] LQP's Comments cite to the recent meetings of the ITU-R Working Party 4A and Task Group 4/5 to demonstrate the utility of using the 4 GHz fixed satellite service ("FSS") bands for non-GSO feeder links. Additional support for the technical feasibility of MSS/FSS shared usage in the 4 GHz band, with the use of reverse band working, is provided in the December 21, 1994, Interim Report of the WRC-95 Industry Advisory Committee, Informal Working Group 4, dealing with feeder link issues.

bands at 1610-1626.5/2483.5-2500 MHz, over 20 MSS networks have been filed with the International Telecommunications Union ("ITU") to date. Most of these MSS networks are non-GSO systems. Studies conducted in the United States indicate fairly stringent inter-service sharing constraints in these bands due to the nature of the other services which are allocated in the 1.6/2.4 GHz band, including Glonass, the Radio-Astronomy Service, FSS, Radar Navigational Systems and the Industrial, Scientific and Medical services. The same studies also show that there are rather severe capacity losses for each of six (5 non-GSO and one GSO) networks operating in the same frequency and coverage areas, even when rather ideal, homogeneous up/downlink ERP/EIRP density limits were imposed on each system.[8] As a result, it seems reasonable to expect the RDSS/MSS bands would reach saturation shortly after the year 2000, assuming early implementation of several proposed "Big LEO" systems.

Existing GSO global MSS providers, such as Inmarsat, which operate in the L-band at 1.5/1.6 GHz, face similar spectrum shortages.[9] The strong demand for MSS, coupled with the fact that MSS networks cannot share service spectrum links very effectively with other MSS networks unless the satellites are spaced at great angles from one another along the geostationary orbit, is likely to result in early saturation of MSS allocations

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[8]See Report of The MSS Above 1 GHz Negotiated Rulemaking Committee, filed in CC Docket No. 92-166, Attachment 1 to Annex 1, Section 5, dated April 6, 1993.

[9]Comments of CMC, IC Docket No. 94-31, at 7-8.

in the L-band. Already in the L-band, over 30 GSO/MSS networks are currently in the process of coordination through the ITU. With the potential backlog of spectrum requirements for proposed, planned and operating systems, it seems likely that prior to the year 2000, the 1.5/1.6 GHz MSS allocations will be unable to accommodate all of the projected MSS traffic.

Given the expected early saturation in the two existing MSS band allocations, it is extremely urgent that the Commission carry through on its prior pronouncements to support additional allocations for global MSS.

B. The Commission Has Pledged Support for Additional MSS Allocations in Prior Spectrum Proceedings

As the Commission is aware, the effort to allocate global spectrum to MSS began in 1989, when the Commission initiated a proceeding to prepare for the 1992 World Administrative Radio Conference ("WARC-92"). Based upon a full record demonstrating immediate and future needs for MSS, the United States took the lead at WARC-92, and, after lengthy negotiation on alternative band pairs in the 2 GHz band,[10] was successful in negotiating new allocations for global MSS in the 1980-2010/2170-2200 MHz bands. The need for global MSS allocations was reaffirmed at WRC-93, in which the conferees agreed to consider moving up the worldwide implementation date for these bands at the 1995 Conference, and

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[10]COMSAT notes that the band 2390-2430 MHz, which contains the 2390-2400 MHz and 2402-2417 MHz bands, was initially proposed by the U.S. Delegation at WARC-92 as primary (earth-to-space) MSS spectrum. See U.S. Delegation Report on the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992).

encouraged Administrations to cooperate immediately in coordination consultations for the use of these bands by MSS.

The Commission has sought comments in the NOI regarding preparations for WRC-95,[11] to assist the agency in developing U.S. proposals that will address ways to facilitate use of the MSS spectrum allocations adopted at WARC-92, identify suitable feeder link bands to support MSS operations, and identify additional spectrum to meet the future needs of MSS. COMSAT and other MSS interests have filed comments on the NOI indicating that the
50 MHz of spectrum proposed for immediate transfer from the Federal Government to the private sector is appropriate for allocation by the Commission as additional global MSS spectrum.[12]

In June 1994, the Commission made another significant pronouncement regarding global MSS systems as part of its decision establishing rules for new Personal Communications Services ("PCS").[13] In that decision, the Commission recognized the potential value of MSS service and shifted its initial PCS allocation out of the 2180-2200 MHz global MSS downlink band in order to preserve most of the WARC-92 MSS global allocations. The Commission's revised PCS plan was upheld on reconsideration

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[11]Notice of Inquiry, IC Docket 94-31, FCC 94-96, released May 5, 1994 ("WRC-95 NOI").

[12]See, e.g., Comments of CMC, IC Docket No. 94-31, July 15, 1994; Reply of CMC, IC Docket 94-31, August 5, 1994.

[13]Memorandum Opinion and Order, GEN Docket 90-314, FCC 94-144, released June 13, 1994 ("June 1994 PCS Order").

in October 1994.[14]

Nevertheless, as a result of its PCS decision, 20 MHz of uplink MSS spectrum -- 10 MHz in the Region 2 band at 1970-1980 MHz and 10 MHz of the global band at 1980-1990 MHz -- which was allocated by the Commission to terrestrial PCS, potentially has been rendered unusable for MSS in the United States. For that reason, the Commission expressed its intent in the June 1994 PCS Order to initiate a domestic proceeding to investigate additional MSS allocation possibilities, including the relocation of broadcast auxiliary operations in the adjacent 1990-2010 MHz band, and stated that it would pursue additional international allocations for MSS at WRC-95.[15] The October 1994 PCS Order reiterated the intent to commence a rule making for global MSS allocations "prior to the December 1994 broadband PCS

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[14]Third Memorandum Opinion and Order, GEN Docket 90-314, FCC 94-144, released October 19, 1994 ("October 1994 PCS Order").

[15]COMSAT disagrees with the position of the broadcast industry in the instant proceeding which seeks additional allocations for broadcast auxiliary spectrum. Credible evidence has not been submitted in the record to demonstrate an immediate and definite need for additional spectrum to accommodate "wideband advance digital video service and/or terrestrial fixed or mobile broadcast auxiliary services." See Joint Comments of Association for Maximum Service Television, et al., ET Docket No. 94-32, at 15.

Moreover, in the June 1994 PCS Order the Commission expressly stated that the 1990-2010 MHz band "could potentially be reallocated for MSS use on a shared basis [with broadcast auxiliary services], if feasible, or exclusively, if suitable replacement spectrum could be found for the broadcast auxiliary service." June 1944 PCS Order at para. 97. Accordingly, it would not be appropriate for the Commission to allocate additional spectrum to broadcast auxiliary interests without first considering the overriding and pressing interests of global MSS systems.

auction." [16]

Notwithstanding the Commission's good intentions, more than five years after beginning the process of identifying global MSS spectrum at 2 GHz, and more than two years since the WARC-92 2 GHz MSS allocation, the global MSS community is still awaiting release of an NPRM to adopt an allocation plan for 2 GHz MSS spectrum in the United States. It is vitally important that the Commission carry out its plan to allocate spectrum at 2 GHz for global MSS systems.

It is equally important that the Commission, and, indeed, the world at WRC-95, continue to identify additional allocations for global MSS service and feeder links in order to realize the economic and technological benefits of MSS. Global MSS systems such as Inmarsat-P, which was approved last month by the Inmarsat Assembly, will stimulate economic growth both in the United States and abroad while meeting the telecommunications needs of international business and helping to extend the global information infrastructure to remote locations around the world. To ensure a vibrant future for global MSS, COMSAT urges the Commission to adopt a specific plan to allocate spectrum for global MSS in this proceeding.

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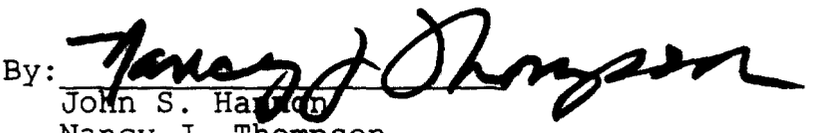
[16] October 1994 PCS Order at para. 88.

III. CONCLUSION

For the reasons provided above, COMSAT urges the Commission to reject its "flexible allocation" approach and, instead, adopt an alternative approach which specifically would allocate the 2390-2400 MHz and 2402-2417 MHz bands for MSS service links and would allocate the 4660-4685 MHz band for MSS feeder links.

Respectfully Submitted,

COMSAT Corporation

By: 

John S. Hanton
Nancy J. Thompson

COMSAT Mobile Communications
22300 COMSAT Drive
Clarksburg, MD 20817

(301) 428-2268

Its Attorneys

January 6, 1995